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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,318	08/31/2001	Tore Nauta	NL 000483	2147

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EXAMINER	
STULTZ, JESSICA T	

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/944,318	NAUTA ET AL.	
	Examiner	Art Unit	
	Jessica T. Stultz	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20 and 22* is/are pending in the application.

4a) Of the above claim(s) *13-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Examiner's Comments

For applicant's information, the amendments to claims 6-7 and 11 filed November 8, 2005 overcome the previous objections to these claims.

Terminal Disclaimer

The terminal disclaimer filed on November 8, 2005 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of US 6,741,304 has been reviewed and is accepted. The terminal disclaimer has been recorded. Therefore the previous obvious-type double patenting rejection of claims 1-2, 6-7, 10 and 22 has been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-9, 11-12, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Jelley et al.

Regarding claim 1, Jelley et al discloses a display device comprising a display panel having a first light-transmissive substrate provided with electrodes at the area of pixels arranged in rows and columns (Column 2, lines 22-68, wherein the first transparent substrate is "24" with electrodes "30" corresponding to pixels "36", Figures 1-2), a second light-transmissive substrate (Column 2, lines 22-68, wherein the second transparent substrate is "22", Figures 1-2), and electro-optic material (Column 2, lines

22-68, wherein the electro-optic material is liquid crystal material "20", Figures 1-2) between the two substrates (Figures 1-2), and an illumination system situated on the side of the second substrate remote from the electro-optical material, the illumination system including an optical waveguide of optically transparent material having an exit face facing the display panel (Column 3, lines 25-41, wherein the illumination device is "14" including transparent polymeric waveguide "40" with an exit face "48", Figures 1-2) and wherein the waveguide is adapted for selectively coupling out light (Column 3, line 25-Column 4, line 55, wherein the illumination for waveguide "40" is provided by individually selected emission of diodes "52", "54", and "56", which provide light to respective output sites "48", Figures 1-2) for a group of rows of pixels or a group of columns of pixels (Column 3, line 25-Column 4, line 55, wherein the waveguide "40" is coupled to pixels "36" and selectively illuminates rows and columns of the pixels "36" from respective sites "48", Figures 1-2) and for coupling in light in a direction which is substantially parallel to the exit face (Column 3, line 25-Column 4, line 55, Figures 1-2).

Regarding claims 2-3, Jelley et al further discloses that the illumination system includes a backlight and a waveguide having an entrance face for light extending transversely to the exit face, which is coupled to the backlight (Column 1, lines 40-57, wherein the liquid crystal is illuminated by a backlight, and Column 5, line 51-Column 6, line 31, wherein the waveguide "102" receives light from a backside illuminator "100", Figures 1-2 and 4), wherein the backlight has an entrance face at least one of the end faces of the waveguide extending transversely to the rows to be coupled to the end face (Shown in Figure 4) and a selectively switchable light switch situated between the

backlight and entrance face (Column 3, lines 1-24 and Column 4, lines 31-54, wherein the pixels are selectively adjusted by selective electrical potentials, Figures 1-2).

Regarding claim 5, Jelley et al further discloses that the illumination system includes sub-segments (Column 5, line 51-Column 6, line 31, wherein the waveguide "102" is broken down into sub-segments as shown in Figure 4) and a backlight with an entrance face for the sub-segments (Column 1, lines 40-57, wherein the liquid crystal is illuminated by a backlight, and Column 5, line 51-Column 6, line 31, wherein the waveguide "102" receives light from a backside illuminator "100", Figures 1-2 and 4), while light from the backlight can be coupled into the sub-segments (Shown in Figure 4).

Regarding claim 6, Jelley et al further discloses that light from the backlight can be coupled in along an entrance face extending at an angle to the exit face (Shown in Figure 2, wherein the exit face includes exit faces "48", which form angles to the entrance face "42"), and switches are situated betweent he backlight and the waveguide (Column 3, lines 1-24 and Column 4, lines 31-54, wherein the pixels are selectively adjusted by selective electrical potentials, Figures 1-2).

Regarding claim 9, Jelley et al further discloses that the illumination system includes a backlight having an entrance face for light into the optical waveguide to be coupled into an entrance face extending transversely to the exit face (Column 1, lines 40-57, wherein the liquid crystal is illuminated by a backlight, and Column 5, line 51-Column 6, line 31, wherein the waveguide "102" receives light from a backside illuminator "100", Figures 1-2 and 4), wherein parts of the backlight are selectively switchable between an on-state, having high intensity, and an off-state (Column 3, lines

1-24 and Column 4, lines 31-54, wherein the pixels are selectively adjusted by selective electrical potentials, Figures 1-2).

Regarding claim 11, Jelley et al further discloses that the display unit includes a drive unit capable of presenting signals to data and column electrodes for the purpose of writing pixels, and selectively activating a part of the illumination system associated with the group of rows of pixels (Column 3, lines 1-24 and Column 4, lines 31-54, wherein the pixels are selectively adjusted by selective electrical potentials to the electrodes "30", Figures 1-2).

Regarding claim 12, Jelley et al discloses a display device as shown above, but does not specifically disclose that the drive unit introduces a delay between the presentation of signals to the data and column electrodes and the selective activation of the part of the illumination system associated with the group of rows of pixels. However, it is inherent that a delay would be introduced, this being reasonably based upon the fact that the electrical signals must pass through wires to the electrodes and therefore a delay would occur between the initiation of the signal and the activation of the illumination system.

Regarding claims 4, 8, and 22, Jelley et al further discloses that the switch includes an electro-optical switching device (Column 3, lines 1-24 and Column 4, lines 31-54, wherein the pixels are selectively adjusted by selective electrical potentials, Figures 1-2) with an electro-optic material between the substrates (Column 2, lines 22-68, wherein the electro-optic material is liquid crystal material "20", Figures 1-2), wherein at least one substrate has strip-shaped electrodes (Figure 1, wherein the electrodes are "30").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jelley et al in view of Deacon et al.

Regarding claims 7 and 10, Jelley et al discloses a display device as shown above, but does not specifically disclose that the switch includes a switchable reflective mirror or that the backlight comprises a prismatic element. Deacon et al teaches of a laser array to illuminate a waveguide for a display wherein mirrors and prismatic structures are used to increase the efficiency of the connection between the laser diode array and the waveguide (Column 20, lines 28-53). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the display device of Jelley et al to further include the switch having a switchable reflective mirror and the backlight comprising a prismatic element since Deacon et al teaches of laser array to illuminate a waveguide for a display wherein mirrors and prismatic structures are used to increase the efficiency of the connection between the laser diode array and the waveguide.

Response to Arguments

Applicant's arguments, see Remarks, filed November 8, 2005, with respect to the 102 (e) rejection over Nauta et al '304, have been fully considered and are persuasive.

The 102 (e) rejection over Nauta et al '304 of claims 1-4, 8, 11, and 22 has been withdrawn.

Applicant's arguments filed November 8, 2005, with respect to the 102 (b) rejections over Jelley et al US 5,377,027 have been fully considered but they are not persuasive. Specifically, applicant argues that the optical waveguide of Jelley et al is not adapted for selectively coupling light to the display panel for a group of rows of pixel, or a group of columns of pixels. However, Jelley et al discloses that the waveguide is adapted for selectively coupling out light (Column 3, line 25-Column 4, line 55, wherein the illumination for waveguide "40" is provided by individually selected emission of diodes "52", "54", and "56", which provide light to respective output sites "48", Figures 1-2) for a group of rows of pixels or a group of columns of pixels (Column 3, line 25-Column 4, line 55, wherein the waveguide "40" is coupled to pixels "36" and selectively illuminates rows and columns of the pixels "36" from respective sites "48", Figures 1-2).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T. Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jessica Stultz
Patent Examiner
AU 2873
January 11, 2006

JORDAN SCHWARTZ
PRIMARY EXAMINER